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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,126	04/09/2001	Ki-Chul Kim	P56260	5986
7590	03/10/2005		EXAMINER YAO, KWANG BIN	
Robert E. Bushnell 1522 K Street, N.W., Suite 300 Washington, DC 20005-1202			ART UNIT 2667	PAPER NUMBER

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/828,126

Applicant(s)

KIM, KI-CHUL

Examiner

Kwang B. Yao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 23-27 is/are rejected.
- 7) ☒ Claim(s) 19-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/9/01</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 15-18 and 23-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Sayers et al. (US 6,729,929).

Sayers et al. discloses a communication system comprising the following features:

regarding claim 15, a unified in-building (column 18, lines 61-63) communication apparatus (Fig. 1, PRIVATE NETWORKS 14) connected to a public land mobile network (Fig. 1, PUBLIC WIRELESS NETWORK 15), a public switched telephone network/integrated services digital network (Fig. 1, PUBLIC NETWORK 8; Fig. 2, PSTN 26, ISDN 28), and an Internet protocol network (Fig. 1, PUBLIC NETWORKS 8; Fig. 2, INTERNET 25), said apparatus comprising: at least one in-building (column 18, lines 61-63) repeater (Fig. 3, P-BTS 27-20) forming a public/private common cell (Fig. 3; and column 11, lines 47-67) in which said public land mobile network (Fig. 1, PUBLIC WIRELESS NETWORK 15) and an in-building (column 18, lines 61-63) private wireless network (Fig. 1, PRIVATE WIRELESS NETWORK 22; Fig. 3, PRIVATE WIRELESS REGION 211) are commonly used; a call manager (Fig. 6; column 13, line 35 to column 16, line 14) controlling a wireless call of a registered extension mobile

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terminal of said in-building (column 18, lines 61-63) private wireless network (Fig. 1, PRIVATE WIRELESS NETWORK 22; Fig. 3, PRIVATE WIRELESS REGION 211), controlling operation and maintenance of radio resources, controlling private base station controller resources, and controlling registration and function setup of extension mobile subscriber corresponding to said extension mobile terminal; and a public/private communication service unit (Fig. 2, Gateway 42) being connected to said public land mobile network (Fig. 1, PUBLIC WIRELESS NETWORK 15), said public switched telephone network/integrated services digital network (Fig. 1, PUBLIC NETWORK 8; Fig. 2, PSTN 26, ISDN 28), and said Internet protocol network (Fig. 1, PUBLIC NETWORKS 8; Fig. 2, INTERNET 25), said public/private communication service unit (Fig. 2, Gateway 42) performing an incoming/outgoing call from and to an office line and an extension call through an in-building (column 18, lines 61-63) private branch exchange (column 13, lines 18-24), performing wireless communication of a registered mobile terminal in a base station under control of said call manager (Fig. 6; column 13, line 35 to column 16, line 14), and performing communication of an Internet protocol terminal; regarding claim 16, said at least one repeater being connected to an antenna corresponding to a predetermined area, said extension mobile terminal distinguishing a radio wave of said private in-building (column 18, lines 61-63) wireless network from a radio wave of said public land mobile network (Fig. 1, PUBLIC WIRELESS NETWORK 15) according to different pilot strength (RSSI, column 18, lines 3-38); regarding claim 17, said call manager (Fig. 6; column 13, line 35 to column 16, line 14) being connected to said public/private communication service unit (Fig. 2, Gateway 42) through a local area network cable; regarding claim 18, said at least one repeater corresponding to a plurality of repeaters (Fig. 2, P-BTS 27-1;

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P-BTS 27-P); regarding claim 23, at least one in-building (column 18, lines 61-63) repeater (Fig. 3, P-BTS 27-20) forming a public/private common cell (Fig. 3; and column 11, lines 47-67) in which a public land mobile network (Fig. 1, PUBLIC WIRELESS NETWORK 15) and an in-building (column 18, lines 61-63) private wireless network (Fig. 1, PRIVATE WIRELESS NETWORK 22; Fig. 3, PRIVATE WIRELESS REGION 211) are operating and available; a call manager (Fig. 6; column 13, line 35 to column 16, line 14) controlling a wireless call of a registered extension mobile terminal of said in-building (column 18, lines 61-63) private wireless network (Fig. 1, PRIVATE WIRELESS NETWORK 22; Fig. 3, PRIVATE WIRELESS REGION 211), controlling operation and maintenance of radio resources, controlling private base station controller resources, and controlling registration and function setup of extension mobile subscriber corresponding to said extension mobile terminal; and a public/private communication service unit (Fig. 2, Gateway 42) being connected to said public land mobile network (Fig. 1, PUBLIC WIRELESS NETWORK 15), a public switched telephone network/integrated services digital network (Fig. 1, PUBLIC NETWORK 8; Fig. 2, PSTN 26, ISDN 28), and an Internet protocol network (Fig. 1, PUBLIC NETWORKS 8; Fig. 2, INTERNET 25), said public/private communication service unit (Fig. 2, Gateway 42) performing an incoming/outgoing call from and to an office line and an extension call through an in-building (column 18, lines 61-63) private branch exchange (column 13, lines 18-24), performing wireless communication of a registered mobile terminal in a base station under control of said call manager (Fig. 6; column 13, line 35 to column 16, line 14), and performing communication of an Internet protocol terminal; regarding claim 24, said apparatus corresponding to a unified in-building (column 18, lines 61-63) communication apparatus (Fig.

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1, PRIVATE NETWORKS 14) connected to said public land mobile network (Fig. 1, PUBLIC WIRELESS NETWORK 15), said public switched telephone network/integrated services digital network (Fig. 1, PUBLIC NETWORK 8; Fig. 2, PSTN 26, ISDN 28), and said Internet protocol network (Fig. 1, PUBLIC NETWORKS 8; Fig. 2, INTERNET 25); regarding claim 25, said public land mobile network (Fig. 1, PUBLIC WIRELESS NETWORK 15) corresponding to a wireless public communication service; regarding claim 26, said apparatus providing communications functions to said registered extension mobile terminal located in said public/private common cell (Fig. 3; and column 11, lines 47-67). See column 9-28.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-14 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sayers et al. (US 6,729,929) in view of Belanger et al. (US 5,875,186).

Sayers et al. discloses a communication system comprising the following features: regarding claim 1, a unified in-building (column 18, lines 61-63) communication method in a communication system connected to a public land mobile network (Fig. 1, PUBLIC WIRELESS NETWORK 15), a public switched telephone network/integrated services digital network (Fig. 1, PUBLIC NETWORK 8; Fig. 2, PSTN 26, ISDN 28), and an Internet protocol network (Fig. 1, PUBLIC NETWORKS 8; Fig. 2, INTERNET 25), said method comprising the steps of: forming

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a common cell area (Fig. 3; and column 11, lines 47-67) in which a wireless public communication service and a wireless in-building (column 18, lines 61-63) communication service are available in a prescribed local area; connecting a mobile switching center to said public land mobile network (Fig. 1, PUBLIC WIRELESS NETWORK 15); providing communications functions (Fig. 6; column 13, line 35 to column 16, line 14) to a registered mobile terminal when said registered mobile terminal is located in said common cell area (Fig. 3; and column 11, lines 47-67); regarding claim 2, said communication system and said public land mobile network (Fig. 1, PUBLIC WIRELESS NETWORK 15) sharing a base station; regarding claim 4, said registered mobile terminal corresponding to an extension telephone of said communication system when said registered mobile terminal is located in said common cell area (Fig. 3; and column 11, lines 47-67), said registered mobile terminal not corresponding to said extension telephone when said registered mobile terminal is not located in said common cell area (Fig. 3; and column 11, lines 47-67); regarding claim 5, said communications functions (Fig. 6; column 13, line 35 to column 16, line 14) including voice and data services; regarding claim 6, said common cell area (Fig. 3; and column 11, lines 47-67) corresponding to at least one building (column 18, lines 61-63); regarding claim 7, said common cell area (Fig. 3; and column 11, lines 47-67) corresponding to an enclosed three-dimensional space; regarding claim 8, said space corresponding to a building (column 18, lines 61-63); regarding claim 9, said registered mobile terminal corresponding to a wireless terminal outputting and inputting signals through air, said extension telephone corresponding to a wire telephone outputting and inputting signals through cable; regarding claim 10, outputting signals from said registered mobile terminal to at least one antenna (Fig. 3, antenna attached to P-BTS) mounted in said common cell area (Fig. 3; and

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column 11, lines 47-67), said at least one antenna (Fig. 3, antenna attached to P-BTS) being coupled to said communication system; regarding claim 11, said registered mobile terminal communicating with one selected from among a wire extension terminal and a wireless extension terminal, and said registered mobile terminal wirelessly receives a data service through said Internet protocol network (Fig. 1, PUBLIC NETWORKS 8; Fig. 2, INTERNET 25); regarding claim 12, said wireless in-building (column 18, lines 61-63) communication service being performed in a single cell so that a handoff does not occur (cell area is a radio hole, see column 23, line 37 to column 26, line 19); regarding claim 13, wherein for the same service provider, when said registered mobile terminal moves out of said common cell area (Fig. 3; and column 11, lines 47-67) and moves into said public land mobile network (Fig. 1, PUBLIC WIRELESS NETWORK 15), the handoff does not occur (cell area is a radio hole, see column 23, line 37 to column 26, line 19); regarding claim 14, wherein for the same service provider, when said registered mobile terminal moves out of said public land mobile network (Fig. 1, PUBLIC WIRELESS NETWORK 15) and moves into said common cell area (Fig. 3; and column 11, lines 47-67), the handoff does not occur (cell area is a radio hole, see column 23, line 37 to column 26, line 19). See column 9-28.

Sayers et al. does not disclose the following features: regarding claim 1, not providing said communications functions to an unregistered mobile terminal, and bypassing said unregistered mobile terminal; regarding claim 3, said bypassed unregistered mobile terminal sharing a base station of said communication system; regarding claim 27, said apparatus not providing communications functions to an unregistered mobile terminal located in said public/private common cell.

Belanger et al. discloses a communication system comprising the following features: regarding claim 1, not providing said communications functions to an unregistered mobile terminal (column 25, lines 64-65), and bypassing said unregistered mobile terminal (column 25, lines 64-65); regarding claim 3, said bypassed unregistered mobile terminal (column 25, lines 64-65) sharing a base station of said communication system; regarding claim 27, said apparatus not providing communications functions to an unregistered mobile terminal (column 25, lines 64-65) located in said public/private common cell. It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Sayers et al., by using the features, as taught by Belanger et al., in order to provide a higher quality communication links and a more efficient use of the communications channel. See Belanger et al., column 2, lines 16-17, and lines 55-57.

Allowable Subject Matter

5. Claims 19-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sinivaara et al. (US 6,600,924) discloses a cell handover method.

Bielefeld et al. (US 6,400,949) discloses a process for establishing connections.

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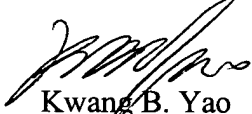
Jokimies (US 2001/0011019) discloses a cellular radio system.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwang B. Yao whose telephone number is 571-272-3182. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KWANG BIN YAO
PRIMARY EXAMINER



Kwang B. Yao
March 1, 2005